

SEP 28 2007

Appl. No. 10/715,548
Response dated October 4, 2007
Reply to Office action of June 4, 2007

Draft: September 28, 2007

Listing of claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.-55. (Cancelled)

56. (New) A method of inhibiting the metabolism of nicotine to cotinine comprising administering to an individual an effective amount of at least one substance which selectively inhibits CYP2A6, wherein said individual has a condition selected from drug dependencies, psychosis, schizophrenia, Parkinson's disease, anxiety, depression, alcoholism, dependent tobacco use and non-dependent tobacco use.

57. (New) The method of claim 56, wherein the individual maintains elevated plasma concentrations of nicotine compared to an individual who has not been administered a CYP2A6 inhibitor.

58. (New) The method of claim 56, wherein liver enzyme function is inhibited by greater than 80% following administration of the CYP2A6 inhibitor.

59. (New) The method of claim 56, wherein the condition is dependent or non-dependent tobacco use.

60. (New) The method of claim 59, wherein the condition is smoking.

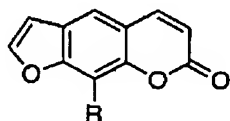
61. (New) The method of claim 56, comprising optionally administering to an individual a mixture comprising two or more of said substances which selectively inhibits CYP2A6.

62. (New) The method of claim 56, wherein the substance which selectively inhibits CYP2A6 is selected from

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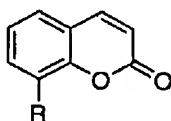
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antibodies specific for P4502A6, coumarin, 7-methoxycoumarin, 7-methylcoumarin, 7-ethoxycoumarin, furanocoumarin, methoxsalen, imperatorin, psoralen, α -naphthoflavone, isopimpinellin, β -naphthoflavone, bergapten, sphondin, coumatetralyl, (+)-cis-3,5-dimethyl-2-(3-pyridyl)-thiazolidim-4-one, naringenin, diethyldithiocarbamate, nitropyrene, menadione, imidazole antimycotics, hexamethylphosphoramide, 4-methylnitrosamine-3-pyridyl-1-butanol, aflatoxin B, indole, dihydrocoumarin, chomone, 3-isochromanone, 4,4'-methylene bis[2-chloroaniline], 6-aminochrysene, dicumarol, 4-chromanone, 4-chromanol, 1-naphthol, 1,3-indandione, 1-indanone, warfarin, sphondin, amgelicin, pimpinellin, a compound having the structure:



wherein R is $-\text{OCH}_2\text{CH}_3$, $-\text{OCH}_2\text{CH}_2\text{CH}_3$, $-\text{CH}_2\text{CH}_2\text{CH}_3$, $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$, $-\text{OH}$, $-\text{NH}_2$, $-\text{NO}_2$ or $-\text{C}_6\text{H}_5$;

a compound having the structure:

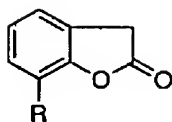


wherein R is $-\text{OCH}_3$, $-\text{OCH}_2\text{CH}_3$, $-\text{OCH}_2\text{CH}_2\text{CH}_3$, $-\text{OCH}_2\text{CH}_2\text{CH}_2\text{CH}_3$, $-\text{CH}_3$, $-\text{CH}_2\text{CH}_3$, $-\text{CH}_2\text{CH}_2\text{CH}_3$, $\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$, $-\text{OH}$, $-\text{NH}_2$, $-\text{NO}_2$ or $-\text{C}_6\text{H}_5$;

a compound having the structure:

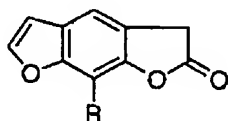
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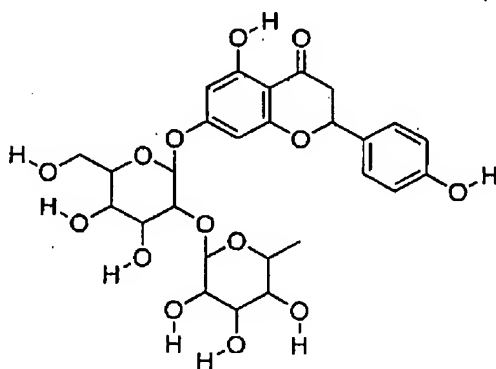
wherein R is -H, -OCH₃, -OCH₂CH₃, -OCH₂CH₂CH₃, -OCH₂CH₂CH₂CH₃, -CH₃, -CH₂CH₃, CH₂CH₂CH₃, CH₂CH₂CH₂CH₃, -OH, -NH₂, -NO₂ or -C₆H₅;

a compound having the structure:



wherein R is $-\text{OCH}_3$, $-\text{OCH}_2\text{CH}_3$, $-\text{OCH}_2\text{CH}_2\text{CH}_3$, $-\text{OCH}_2\text{CH}_2\text{CH}_2\text{CH}_3$, $-\text{CH}_3$, $-\text{CH}_2\text{CH}_3$, $\text{CH}_2\text{CH}_2\text{CH}_3$, $\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$, $-\text{OH}$, $-\text{NH}_2$, $-\text{NO}_2$ or $-\text{C}_6\text{H}_5$;

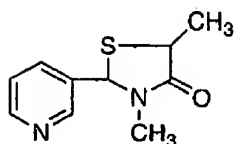
a compound having the structure:



or a compound having the structure:

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63. (New) The method of claim 56, wherein the substance that selectively inhibits CYP2A6 is selected from coumarin, furanocoumarin, methoxsalen, imperatorin, psoralen, α -naphthoflavone, isopimpinellin, β -naphthoflavone, bergapten, sphondin, coumatetralyl (+)-cis-3,5-dimethyl-2-(3-pyridyl)-thiazolidim-4-one, naringenin, diethyldithiocarbamate, nitropyrene, menadione, imidazole antimycotics, pilocarpine, hexamethylphosphoramide, 4-methylnitrosamine-3-pyridyl-l-butanol, aflatoxin B, and mixtures thereof.

64. (New) The method according to claim 63, wherein the imidazole antimycotic is selected from miconazole and clotrimazole.

65. (New) The method of claim 63, wherein said substance is formulated for slow release.